

1. (Original) A safety seat comprising:
  - a. a unitary molded shell having a bottom portion and a back portion, the bottom and the back portions each having a seating surface and a non-seating surface opposite the seating surface; and
  - b. a safety restraint system integral to the shell,wherein the seating surfaces of the bottom and the back portions of the shell have flexible, resilient padding disposed thereon, the safety seat is fixedly attachable by a plurality of brackets to at least one structural member of a vehicle.
2. (Original) The safety seat according to claim 1, further comprising a headrest adjustably attachable to the safety seat, the headrest comprising a molded shell having flexible, resilient padding disposed on a portion thereof.
3. (Original) The safety seat according to claim 1, further comprising a plurality of attachment plates integral to the bottom portion and the back portion of the shell.
4. (Original) The safety seat according to claim 3, wherein the safety restraint system comprises a plurality of restraint straps, each strap having a first and a second end, the first end of each of the plurality of restraint straps being fastened to a corresponding plate of the plurality of attachment plates, the second end of each of the plurality of restraint straps having a connecting device integral thereto for releasably securing together the plurality of restraint straps.
5. (Original) The safety seat according to claim 3, wherein a headrest is adjustably attachable to the back portion of the shell by a connecting member, the connecting member having an upper portion fastened to the headrest and a lower portion fastened to one of the plurality of attachment plates.
6. (Original) The safety seat according to claim 1, wherein the safety restraint system is a five-point harness.

7. (Original) The safety seat according to claim 1, wherein the safety restraint system is a six-point harness.
8. (Original) The safety seat according to claim 1, wherein the padding is a resin.
9. (Original) The safety seat according to claim 8, wherein the resin is formed in a shape of a defined occupant of the safety seat such that that padding is customized for each occupant of the safety seat.
10. (Original) The safety seat according to claim 1, wherein the padding is sculpted foam.
11. (Original) The safety seat according to claim 1, wherein at least one secondary support member is attachable to the shell.
12. (Original) The safety seat according to claim 11, wherein the at least one secondary support member comprises a rib guard attachable to the back portion of the shell, the rib guard having a seating surface and a non-seating surface opposite the seating surface, a flexible, resilient padding being disposed on the seating surface.
13. (Original) The safety seat according to claim 11, wherein the at least one secondary support member comprises a leg rest attachable to the bottom portion of the shell, the leg rest extending forwardly and downwardly relative to the bottom portion.
14. (Original) The safety seat according to claim 1, wherein the back portion includes wings protruding generally perpendicularly from said back portion near a top end thereof.
15. (Original) The safety seat according to claim 14, further comprising a headrest adjustably attachable to the back portion of the shell, the headrest having extending members oriented generally parallel relative to the wings.

16. (Original) The safety seat according to claim 14, wherein linking members extend between and connect the wings and corresponding extending members.
17. (Original) The safety seat according to claim 1, wherein the shell comprises a laminate.
18. (Original) The safety seat according to claim 1, wherein the shell comprises an inner layer, and outer layer and a core disposed between the inner and outer layers.
19. (Original) The safety seat according to claim 18, wherein each of the inner and the outer layers each comprises a plurality of sheets of woven carbon fibers bonded together.
20. (Original) The safety seat according to claim 19, wherein the inner and the outer layers further comprise at least one sheet of KEVLAR® fiber material.
21. (Original) The safety seat according to claim 18, wherein the core comprises an aluminum hexel honeycomb-like material.
22. (Original) The safety seat according to claim 18, wherein the core is bonded to the inner and the outer layers by epoxy resin.
23. (Original) The safety seat according to claim 18, wherein a plurality of attachment plates are disposed intermediate the inner and the outer layers, the attachment plates used for securing at least said safety restraint system to the shell.
24. (Original) The safety seat according to claim 23, wherein the plurality of attachment plates are made of a structural material.
25. (Original) The safety seat according to claim 23, wherein the plurality of attachment plates are made of aluminum.

26. (Original) The safety seat according to claim 23, further comprising support plates disposed on the non-seating surface of the shell, the support plates attached to a portion of the plurality of attachment plates.

27. (Original) The safety seat according to claim 26, wherein the safety seat is attached to at least one structural member of a vehicle by a plurality of brackets extending between and fastened to the support plates and the at least one structural member.

28. (Original) In combination with a vehicle, a safety seat comprising

- a. a unitary molded shell having a bottom portion and a back portion, the bottom and the back portions each having a seating surface and a non-seating surface opposite the seating surface; and
- b. a safety restraint system integral to the shell,

wherein the seating surfaces of the bottom and the back portions of the shell have flexible, resilient padding disposed thereon, the safety seat being fixedly attachable by a plurality of brackets to at least one structural member of the vehicle, the vehicle being an automobile, a watercraft or an aircraft.

29. (Original) The combination according to claim 27, wherein the vehicle is a race car or truck.

30. (Original) The combination according to claim 29, wherein the at least one structural member comprises a roll cage within an operating compartment of the vehicle.

31. (Original) The combination according to claim 27, further comprising a headrest adjustably attachable to the safety seat, the headrest comprising a molded shell having flexible, resilient padding disposed on a portion thereof.

32. (Original) The combination according to claim 27, further comprising a plurality of attachment plates integral to the bottom portion and the back portion of the shell.

33. (Original) The combination according to claim 32, wherein the safety restraint system comprises a plurality of restraint straps, each strap having a first and a second end, the first end of each of the plurality of restraint straps being fastened to a corresponding plate of the plurality of attachment plates, the second end of each of the plurality of restraint straps having a connecting device integral thereto for releasably securing together the plurality of restraint straps.

34. (Original) The combination according to claim 33, wherein the safety restraint system is a five-point harness.

35. (Original) The combination according to claim 33, wherein the safety restraint system is a six-point harness.

36. (Original) The combination according to claim 27, wherein the padding is a resin formed in a shape of a defined occupant of the safety seat such that that padding is customized for the defined occupant.

37. (Original) The combination according to claim 27, wherein at least one secondary support member is attachable to the shell.

38. (Original) The combination according to claim 37, wherein the at least one secondary support member comprises a rib guard attachable to the back portion of the shell, the rib guard having a seating surface and a non-seating surface opposite the seating surface, a flexible, resilient padding being disposed on the seating surface.

39. (Original) The combination according to claim 37, wherein the at least one secondary support member comprises a leg rest attachable to the bottom portion of the shell, the leg rest extending forwardly and downwardly relative to the bottom portion.

40. (Original) The combination according to claim 27, wherein the shell comprises an inner layer, and outer layer and a core disposed between the inner and outer layers.

41. (Original) The combination according to claim 40, wherein each of the inner and the outer layers each comprises a plurality of sheets of woven carbon fibers bonded together.
42. (Original) The combination according to claim 41, wherein the inner and the outer layers further comprise at least one sheet of KEVLAR® fiber material.
43. (Original) The combination according to claim 40, wherein the core comprises an aluminum hexel honeycomb-like material.
44. (Original) The combination according to claim 40, wherein the core is bonded to the inner and the outer layers by epoxy resin.
45. (Original) The combination according to claim 40, wherein a plurality of attachment plates are disposed intermediate the inner and the outer layers, the attachment plates used for securing at least said safety restraint system to the shell.
46. (Original) The combination according to claim 45, wherein the plurality of attachment plates are made of a structural material.
47. (Original) The combination according to claim 46, wherein the plurality of attachment plates are made of aluminum.
48. (Original) A unitary molded shell for a safety seat, the molded shell comprising an inner layer, an outer layer, and a core positioned therebetween.
49. (Original) A molded shell according to claim 48, wherein the inner layer and the outer layer each comprises a plurality of sheets of woven carbon fibers, the plurality of sheets being bonded together.

50. (Original) A molded shell according to claim 49, further comprising at least one sheet of KEVLAR® fiber material disposed within each of the plurality of sheets of woven carbon fibers of the inner and the outer layers.

51. (Original) A molded shell according to claim 48, wherein the core comprises an aluminum hexel honeycomb-like material.

52. (Original) A molded shell according to claim 48, wherein the core is bonded to the inner layer and the outer layer by epoxy resin.

53. (Original) A molded shell according to claim 48, further comprising a plurality of plates disposed intermediate the inner layer and the outer layer, the plurality of plates providing attachment locations thereon.

54. (Original) A molded shell according to claim 53, wherein the plurality of plates is made of a structural material.

55. (Original) A molded shell according to claim 54, wherein the structural material is aluminum.

56. (Original) A molded shell according to claim 53, wherein each of the plurality of plates has a plurality of spaced holes extending therethrough to create defined attachment locations.

57. (Original) A molded shell according to claim 56, wherein the attachment holes are formed in the inner layer and the outer layer to correspond with the defined attachment locations.

58. (Original) A molded shell according to claim 49, wherein the plurality of sheets comprise eight sheets.

59. (Original) A molded shell according to claim 54, further comprising support plates disposed on an exterior surface of the outer layer opposite the attachment plates, the support plates being fastened thereto.

60. (Original) A molded shell according to claim 48, further comprising attachment locations for secondary support members.

Cancel Claims 61-87, without prejudice, to the applicant's right to present such claims in divisional applications.